ARES Response to Slave Lake Fire

Two key disaster characteristics that emergency responders and amateur radio operators need to deal with, especially at the early stages of an incident, are loss of communications and uncertain scope. Amateur radio can provide valuable assistance in these two areas. The Slave Lake disaster provides an excellent example of an ARES response.

Initial Activation

At approximately 1845L on Sunday May 15th, a call came across the radio from VE6ACD requesting ARES operators. Tom VE6TOX was Operations Chief for the Alberta Emergency Management Agency (AEMA), and was looking for operators to attempt contact into the Slave Lake area. For the past number of days the town was under threat by neighboring forest fires. Earlier that afternoon I was advised by Doug VE6CID, ARES Calgary EC, that a local state of disaster was declared.

A text message notification was sent to all ARES Edmonton members requesting an operator to attend the AEMA Provincial Operations Centre (POC). A net was established on VE6NHB 145.410- by Gern VE6KG. Mitch VE6OH responded and was on site at the POC by 1930L. Mitch made contact with numerous hams on 3.700Mhz, just following the Alberta Public Service Net, however no contacts were made from the immediate area. VE6NHB was then linked into the SARA province-wide UHF backbone which allowed us to link into VE6BOX, just outside of Athabasca. A request was made with Sean VE6SAR, AEC Peace River, to see about making contact through the High Prairie VE6PRR repeater just west of Slave Lake. Sean was able to move their local IRLP simplex node to their UHF hub that links into the High Prairie repeater. A request was made to Devon VE5DWR for a dedicated IRLP reflector channel to link High Prairie and the SARA IRLP node. By using a reflector channel, we could link in other areas of the province as needed. The local Slave Lake repeater VE6SLR had no linking capabilities and we were unsure if it would still be operating, considering the area power outages. We continued to operate from the AEMA POC (VE6ACD) till 2345L but unfortunately no local contact in Slave Lake could be made.

Day 1

Doug VE6DHS returned in the morning to receive an update on the situation. Commercial communication into the area appeared to be stable. However there was still a continued threat to the town and possible overload of systems. As the majority of evacuees were being sent to Athabasca, the concern for communication overload was reviewed. It was then decided to send ARES members from Edmonton to establish backup communications from the reception centre. At the same time ARES Peace Country was put on standby for a Slave Lake response, if required. Ties VE6TVN deployed with the Northern Alberta Radio Club's NARCPAC Mobile Communications Trailer to Athabasca and was joined by local ham Barry VE6NPN.

At the time commercial communications was relying entirely on generator power. In the event of any failure or congestion, ARES would be the only backup and currently 3-4 hours away. At 1300L a request from AEMA was made to deploy available members to Slave Lake EOC. Ties VE6TVN was stood down from Athabasca and sent to Slave Lake with NARCPAC. As the fires were surrounding Slave Lake a decision was made to also deploy ARES Peace River, in the event of road closures. Brian VE6RNR and Beckett VE6JUB left from Grande Prairie with their mobile communication unit. Once on-site, Ties

VE6TVN had established 80m contact from Slave Lake EOC to the AEMA POC in Edmonton on 3.675Mhz. As well the 2m repeater in NARCPAC was fired up for local communication and responding personnel. The following additional operators from ARES Edmonton were deployed to assist with 24-hour operation of the 80m station; Neil VA6NF, Richard VE6LE, Les VA6LM, and Kevin VE6DO.

Day 2

With 80m communication stable at night conditions started to weaken come morning and a secondary communication path was needed. Richard VE6LE and Ties VE6TVN started investigating possible locations to deploy cross band equipment. A number of sites were explored but communication between the VE6BOX repeater and the town site were not very stable. Communication on 80m was still useable thanks to a number of HF relay stations. At 1300L it was determined to keep NARCPAC and ARES Edmonton on site, and relieve ARES Peace Country. With a total of 5 operators, this would allow for continued 24 hour communication on 80m.

Day 3

Continued exploration of a cross band repeater location occurred and it was determined that Flat Top Mountain was the best. However additional height would be required to have a stable link into VE6BOX. James VE6SRV has a 40ft crank up trailer with complete repeater package. As we were getting to a point of needing to rotate out members, James offered to deploy along with VA6IP in the morning. Additional operators were needed as the remainder would be coming home Friday afternoon. A review of volunteers and a deployment plan was put in place for Friday.

Day 4

At 1230L we received the word to stand down. The local communication infrastructure was stabilized on generator power with ample fuel supply. In the event the situation changed the portable trailer unit was still setup on Flat Top Mountain. This provided handheld coverage in Slave Lake back to Edmonton via VE6BOX and the SARA linking system, for the displaced hams when they return. At 1700L, all Slave Lake operators returned home safely. The AEMA POC Radio Room, VE6ACD, was also shut down.

Closing Comments

Over the next couple of days, many thanks came from AEMA personal that were involved with the activation. It was stated that without ARES, there would have been no backup. If we had not deployed, just in case, it would have taken 4-5 hours to get members on scene. As this is the first major activation of ARES in Alberta by AEMA, it has shown our ability to respond and provide the backup communication link that was needed. I have mentioned a few operators above, but did not forget the rest. We had numerous operators at the Provincial Operations Centre manning 24 hours around the clock. Our HF relay stations were critical due to 80m day time conditions. Listed below are all the call signs that supported the activation, apologize if I missed anyone.

You will not realize the full scope and impact of a disaster at the start. The Slave Lake fire was the second costliest insurable disaster in Canadian history. More than 7,000 people evacuated from Slave Lake and over 15,000 evacuees registered with the Red Cross. Residents with homes were unable to return for three weeks, only to be flooded by subsequent severe weather.

Tom Cox VA6EEE AEMA Operations Chief stated;
There were significant communications losses, such as loss of the radio station, issues with cell phones and satellite phones, the emergency operations centre and town offices burned to the ground and an ad-hoc emergency operations centre with just one phone. Slave Lake came perilously close to losing almost all communications. Amateur radio was an absolutely critical resource during the response.

Jim Cornish VE6JCO AEMA POC Director stated;
You and your team have performed an invaluable service under the most trying conditions, and I do not use the word "invaluable" casually. In every operation I have personally experienced or studied, effective communications have invariably been a critical factor for success. When communications go well, they also often go unnoticed. When they go poorly, however, so also usually goes the operation. The reliable backup communications which you and your team provide have given the incident command team a comfort level which we would not have otherwise had, and allowed us to focus on other operational priorities during a time when that focus was absolutely critical.

VA6IP, VA6LM,VA6NF,VA6TEC,VA7ANB,VE5DWR,VE6AEW, VE6CIA, VE6CID, VE6DHS, VE6DKS, VE6DO, VE6DXX, VE6JUB, VE6JY, VE6KG, VE6LE, VE6LHW, VE6MSH, VE6NPN, VE6OG, VE6OH, VE6RNR, VE6SA, VE6SAR, VE6SRV, VE6TOX, VE6TVN, VE6UC, VE6XZM, VE7AND

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Additional Notes

Another fact not mentioned here was that a lot of the Ham response could be heard in Calgary. The SARA system was used and kept most of the hams in Alberta aware of what was needed and going on with the deployment to Athabasca and Slave Lake. Communication on HF could be heard on 80 m during the evening [had to work during day so had to listen to UHF]. But at night could hear the activity in Northern Alberta and BC. This could have been useful had there been a larger need for more Ham activity. For scanner listeners, it also kept them informed Not to way lay this thread, but with the SARA backbone being down since the wind storm, it does point out one vulnerability of Ham communications. It is volunteer and when things break, they take awhile to be fixed. However, in emergencies, the responses are always a lot better and faster. They can make do with a lot less than the often overwhelming infrastructure that is now built.

Edmonton Fire Radio streamed the SARA system for the duration of the event. I believe that this activation showed just how relevant amatuer radio is now and will be in the future. When land line communication is just one small tank of diesel fuel away from failing, it really makes you aware of how vulnerable telephone service really is. Robertmac: a few questions, can you hear the vulcan hub repeater? And have you heard any activity on that site since the wind storm? Can you hear the Balzac pass-through on the reverse of the Vulcan hub?

Portable repeaters are part of the solution, I believe expanding SARA is also part of the solution. Having a larger network of Uhf linked repeaters would allow much greater ease in dropping a portable package into a location, allowing for a simpler solution to having local V/Uhf coverage that links directly to the POC, with out having to wait for repeater tails to drop. Although dropping a cross-band repeater onto Flattop Mountain worked there was a considerable repeater tail on VE6BOX that we had to wait to drop before we could talk back, and that slowed down our comm time with Edmonton, as well there was a very short timer of no PTT that would disconnect VE6BOX from the backbone, forcing us to constantly having to re-enter link codes. PITA but in a pinch it did work. Every time an event happenes there is the opportunity to learn what works, what does not work and what needs to change, and what other tools we need for the tool box, SARA was very valuable in this instance, it provided a reliable secondary link. Unfortunately not all local repeater owners want to have a link to SARA, and that is ok, as well the local repeater failed due to no power for an extended period of time with out having anyone able to go and put a generator on it to power/recharge batteries, where as the portable repeater provided adequate coverage for where we were at. Another useful idea was using a dedicated simplex frequency as an alarm clock to wake up operators for their shift in the comm trailer, small idea but extremely useful, and if another multi day event ever happens it is one of those small things that will get used again.

[Two select comments from: http://forums.radioreference.com/prairies-pacific-coast/228566-tca-article-slave-lake-fire.html]